



AP433i

Three-Radio, Three-Stream 802.11n Access Points

Re-architect the edge of your network and tackle the toughest wireless workloads

Featuring a three-radio, three-stream design, the AP433i taps the full potential of 802.11n standards to deliver in today's world of high client density and diversity, meeting the demand for wireless high-bandwidth and mobility applications.

Added radios boost the benefits of Channel Layering, multiplying capacity within a single access point or segregating mission-critical applications. Built for mobility applications, for example an industrial site or convention/arena, the AP433i defines the new network edge, preparing enterprises for the all-wireless workforce and the mobility of business-essential applications.

Designed for flexibility and to answer specific enterprise aesthetics requirements, the AP433i can be configured with optional antennas, including an external wall mount MIMO 3-Patch antenna and

a ceiling mount MIMO panel antenna. The AP433i can also be mounted with a security lock directly on a suspended ceiling or a wall. And because the AP433i is plenum-rated, it can be hidden above a suspended ceiling.

AP433i Benefits:

- Increased scalability and reliability through Meru's Virtualized Wireless LAN architecture and channel layering
- Support for Meru's Service Assurance Application Suite including: E(z)RF™ Network Manager, WIPS, and PCI Compliance Manager
- Supports all 802.11 a/b/g/n devices
- All radios support up to three streams — 3x3:3 802.11n support in both 2.4 GHz and 5 GHz frequency bands

TECHNOLOGY: Patented Virtualized Wireless LAN	MAX DATA RATE: 1.35 Gbps	CONNECTIVITY: 380 clients
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AP433i

TECHNICAL SPECIFICATIONS

APPLICATION SUPPORT AND OVER-THE-AIR QoS

SIP Support

Dynamic out-of-the-box support for SIP applications and codecs

QoS

Configurable dynamic QoS rules
Over-the-air resource reservation
Automatic, stateful flow detectors for SIP
Configurable QoS rules for SIP, H.323, Ascom, Avaya, Microsoft, Polycom's SVP, Siemens, ShoreTel, Vocera, and Cisco SCCP
User-configurable static and dynamic QoS rules per application (user-defined) and per user (stations, users, and port numbers)
Call admissions control and call load balancing
WMM support
WMM rate adaptation, optimized based on real-time network conditions

SECURITY

Authentication

Combination of captive portal, 802.1x, and open authentication
Advanced security using WPA2
802.1x with EAP-Transport Layer Security (EAP-TLS), Tunneled TLS (EAP-TTLS), Protected EAP (PEAP), MS-CHAPv2, Smartcard/ Certificate, Lightweight EAP (LEAP), EAP-FAST, EAP-MD5, EAP-SIM and EAP-AKA, with mutual authentication and dynamic, per-user, per-session unicast and broadcast keys
Secure HTTPS with customizable captive portal utilizing RADIUS

Encryption Support

Static and dynamic 40-bit and 128-bit WEP keys, TKIP with MIC, AES

Security Policy

RADIUS-assisted, per-user and per-ESSID access control via MAC filtering
Multiple ESSID/BSSID, each with flexibility of separate and shared security policy

Rogue Detection and Suppression

All radios capable of scanning 802.11n, 802.11a, and 802.11b/g for rogue devices

MOBILITY

Zero-Loss Handoffs

Infrastructure-controlled, zero-loss handoff mechanism for standard Wi-Fi clients

CENTRALIZED MANAGEMENT

Zero Configuration

Automatically selects power and channel settings
Automatically discovers controllers and download configuration settings
Zero-touch, plug-and-play deployments

System Management

Centralized and remote management and software upgrades via System Director web-based GUI, SNMP, command-line interface (CLI) via serial port, SSH, Telnet, centrally managed via E(z)RF™ Network Manager
Centralized security policy for WLAN, multiple ESSIDs, and VLANs with their own administrative/security policies

Intelligent RF Management

Coordination of access points with load balancing for predictable performance
Centralized auto-discovery, auto-channel configuration, and auto-power selection for APs
Co-channel interference management

WIRELESS SPECIFICATIONS

Wireless Standards

IEEE 802.11 a/b/g/n, IEEE 802.11i support (AES, WEP, WPA, WPA2), IEEE 802.11e, WMM

Power Management

Optimal power control in 1 dBm increments
Ability to disable unused radios via software to lower power consumption

Antenna

Dual-band omni-directional dipole:
2 dBi at 2.4 GHz and 2 dBi at 5 GHz (included)
Option: External dual-band MIMO 3-Patch antenna:
6 dBi at 2.4 GHz and 7 dBi at 5 GHz;
Ceiling mount Omni Dual-Band 3 x 3 MIMO:
3 dBi at 2.4 GHz and 4 dBi at 5 GHz

Client Support

Support for clients that perform active scanning and passive scanning
Support for clients that pre-authenticate
Support for clients that change to and from power-save mode rapidly
Power-save mode for clients in both QoS mode and non-QoS mode

IEEE 802.11n

Frequency Band

2.412 to 2.472 GHz, 5.18 to 5.32 GHz, 5.5 to 5.825 GHz
(frequency range per country codes)

Operating Channels

1 through 11 for 2.4 GHz band (Americas, 1–13 all others)
36 through 165 for 5 GHz band (per country codes)

Data Rates [800 nS G1 Mbps/400 nS G1 Mbps]

20 MHz: 195.0/216.7, 175.5/195.0, 156.0/173.3, 130.0/144.4, 117.0/130.0, 104.0/115.6, 78.0/86.7, 65.0/72.2, 58.5/65.0, 52.0/57.8, 39.0/43.3, 26.0/28.9, 19.5/21.7, 13.0/14.4, 6.5/7.2 Mbps
40 MHz: 405.0/450.0, 364.5/405.0, 324.0/360.0, 270.0/300.0, 243.0/270.0, 216.0/240.0, 162.0/180.0, 135.0/150.0, 121.5/135.0, 108.0/120.0, 81.0/90.0, 54.0/60.0, 40.5/45.0, 27.0/30.0, 13.5/15.0 Mbps

Average Transmit Power

2.4n [20 HT] MCS0/8/16: 21 dBm; 2.4n [40 HT] MCS0/8/16: 20 dBm
2.4n [20 HT] MCS7/15/23: 17 dBm; 2.4n [40 HT] MCS7/15/23: 16 dBm
5.0n [20 HT] MCS0/8/16: 18 dBm; 5.0n [40 HT] MCS0/8/16: 17 dBm
5.0n [20 HT] MCS7/15/23: 15 dBm; 5.0n [40 HT] MCS7/15/23: 14 dBm

Receive Sensitivity (for max data rates)

2.4n [20 HT] MCS0/8/16: -92 dBm; 2.4n [40 HT] MCS0/8/16: -93 dBm
2.4n [20 HT] MCS7/15/23: -76 dBm; 2.4n [40 HT] MCS7/15/23: -74 dBm
5.0n [20 HT] MCS0/8/16: -93 dBm; 5.0n [40 HT] MCS0/8/16: -92 dBm
5.0n [20 HT] MCS7/15/23: -75 dBm; 5.0n [40 HT] MCS7/15/23: -71 dBm

IEEE 802.11a

Frequency Band

5.180–5.240 GHz: 8 channels [34, 36, 38, 40, 42, 44, 46, 48]; 5.280–5.320 GHz: 4 channels [52, 56, 60, 64]; 5.745–5.825 GHz: 5 channels [149, 153, 157, 161, 165]; 5500–5700: 11 channels [100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140]

Operating Channels

Configurable based on country regulations

Data Rates

54, 48, 36, 24, 18, 12, 9, and 6 Mbps with automatic rate adaptation

Transmit Power

19 dBm at 6 Mbps and 16 dBm at 54 Mbps

Receive Sensitivity

-81 dBm at 54 Mbps and -93 dBm at 6 Mbps

IEEE 802.11b/g

Frequency Band

Hardware supports 2.40–2.50 GHz: 2.4–2.4835 GHz (US, Europe), 2.4–2.497 GHz (Japan only)

Operating Channels

1–11 US/Canada, 1–13 Europe, and 1–14 Japan
3 non-overlapping channels

Transmit Power

17–21 dBm

802.11b Data Rates

11, 5.5, 2, and 1 Mbps with automatic rate adaptation

802.11g Data Rates

54, 48, 36, 24, 18, 12, 9, and 6 Mbps with automatic rate adaptation

802.11b/g Receive Sensitivity

-80 dBm at 54 Mbps, -90 dBm at 11 Mbps, -90 dBm at 6 Mbps, and -92 dBm at 1 Mbps

PHYSICAL SPECIFICATIONS

Dimensions

7.85" length × 6.5" width × 1.4" height
[19.9 cm length × 16.5 cm width × 3.6 cm height]

Weight

2 lbs 4 oz [1.62 kgs]

Power

802.3at PoE for 3-radio operation and 802.3af for 2-radio operation
Draws 12.95W to 18W depending on configuration

Environmental

Operating temperature: 0° to 50° C [32° F to 122° F]
Operating humidity: 90% [non-condensing]
Storage temperature: -10° to +70° C ambient
Storage humidity: 95% [non-condensing]

Interfaces

One auto-sensing 10/100/1000 Base-TX Ethernet (RJ-45)
Three dual-band radios support any combination of 802.11a/b/g/n
USB port

Standard Warranty

Limited lifetime warranty

Mounting Options

Suspended ceiling and wall-mounting bracket with security lock (included), recessed ceiling bracket (option), interlude ceiling bracket (option)

AP433i Part Numbers

Contact your representative for detailed information

Certifications

Wi-Fi Certified a/b/g/n



Radio

FCC Part 15.247;
FCC Part 15.407 (US); RSS-210 (Canada);
EN 300 328; ARIB STD-T66; IDA
RCR STD-33; ARIB STD-T71 (Japan);
EN 301 893(EU)

Safety

UL 60950-1; IEC 60950-1;
EN 60950-1; CAN/CSA-C22.2
No. 60950-1

Emissions

EN 55022 Class B; EN 55024;
EN 60601-1-2; EN 301 489-1;
EN 301 489-17; ICES-003 Class B;
FCC Part 15, Class B

Meru delivers an all-wireless network that fully supports the enterprise, delivering a consistent, interactive experience for all users. No matter what applications they are running. No matter how many other users are on the network.



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